

Mail Stop Non-fee Amendment

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DN A01201

In re application of: Redlich, et. al.

Serial No.: 10/085,156

: Group Art Unit: 1714

Filed: 02/27/2002

: Examiner: K. Sanders

For: Resin Immobilized Biocide

RECEIVED  
CENTRAL FAX CENTER

JAN 21 2004

OFFICIAL

Mail Stop Non-fee Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450  
Dear Sir:

**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that the following papers are being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Response to Official Action dated 10/21/2003

January 21, 2004  
Date

*Thomas D. Rogerson*  
Signature

Total Pages 4

Fax No. 703-872-9306

Mail Stop Non-fee Amendment

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DN A01201

In re application of: Redlich, et. al.

Serial No.: 10/085,156

: Group Art Unit: 1714

Filed: 02/27/2002

: Examiner: K. Sanders

For: Resin Immobilized Biocide

RECEIVED  
CENTRAL FAX CENTER

JAN 21 2004

OFFICIAL

Mail Stop Non-fee Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450  
Dear Sir:

**RESPONSE**

This is in response to the Office Action dated October 21, 2003 for the above-identified patent application.

**REMARKS**

Claims 1 to 4 are pending in the Application. Claims 1-4 are rejected. Reconsideration and withdrawal of the rejection of record is requested in view of the following comments:

**Rejection under 35 USC §102(e)**

Claims 1-13 are rejected under 35 USC §102(e) as being clearly anticipated by Herbst, et.al., US Patent No. 6,528,556 ("Herbst") in that Herbst discloses polymeric compositions, including EVA/carbon monoxide copolymers, which contain a biocidal agent in an amount of 0.1 to 10% by weight.

Applicants do not agree with the conclusion that Herbst discloses Applicants' invention. Herbst discloses a process for biocidally finishing plastic materials by adding to the plastic materials at least one biocide selected from among four different s-triazines. Plastic materials disclosed include a wide variety of polymers from 21 different classes of polymers (see col 2, line 20 through col.5, line 8. This is a truly exhaustive list. The very particularly preferred polymers are LDPE, HDPE, polypropylene, polyethylene terephthalate, UP resin, or

polymethacrylates. (see col. 5, lines 24-26) The four *s*-triazines are 2-methylthio-4-cyclopropylamino-6-( $\alpha,\beta$ -dimethylpropylamino)-*s*-triazine, 2-methylthio-4-cyclopropylamino-6-tert-butylamino-*s*-triazine, 2-methylthio-4-ethylamino-6-tert-butylamino-*s*-triazine, and 2-methylthio-4-ethylamino-6-( $\alpha,\beta$ -dimethylpropylamino)-*s*-triazine. Thus, the invention of Herbst discloses only a narrow group of *s*-triazine biocides in combination with a huge variety of polymers. Herbst also discloses that additional biocides may be added, including 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one. However, this disclosure is also very general as the additional biocides may also include those found in "The Pesticide Manual", an exhaustive list of pesticidal compounds. (see col. 5, lines 49-50). It appears that the reference to 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one is for its use in combination with the 4 *s*-triazines in Herbst's compositions. (see col. 5, line 51 referring to active substances used in combination). However, there is no specific disclosure in Herbst of any composition comprising 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one or 2-n-octyl-4-isothiazolin-3-one and any of the seven polymers in Applicants' claimed composition.

Applicants' invention is the discovery of certain specific resin(i.e.polymer)/biocide compositions that are compatible with other polymers previously considered hard to compatibilize with biocides. (see the Specification, page 1, lines 11-14). The compositions are combinations of a polymer selected from seven specific polymers (or their mixtures) and two biocides, 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one and 2-n-octyl-4-isothiazolin-3-one. The entire purpose of Applicants' composition is to have a biocide/polymer composition which one can then add to materials such as HDPE, LDPE, and other polyolefins in which the biocides alone are not compatible. This is the discovery that is not disclosed in Herbst.

Herbst claimed invention requires the presence of the polymer and an *s*-triazine only. The composition may optionally include a third biocide which may be, among many others, 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one. (see Claim 1 and col. 5, line 39 to col 6, line 6) Applicants' invention does not require the presence of an *s*-triazine. Furthermore, Herbst's preferred polymers include HDPE and LDPE. These types of polymers (i.e. plastics) are what Applicants' have found to be incompatible with 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one and 2-n-octyl-4-isothiazolin-3-one and, as a result, require the use of one or more of the specific seven polymers to immobilize the biocide.

Because Herbst does not disclose the use of 4,5-dichloro-2-n-octyl-4-isothiazolin-3-one or 2-n-octyl-4-isothiazolin-3-one immobilized in one or more of the seven specific polymers *in the absence of an s-triazine*, which is Applicants' invention, Herbst does not anticipate Applicants' invention. Applicants respectfully request that the rejection under 35 USC §102(e) be withdrawn.

With this response, Applicants believe that the rejection has been overcome and the claims are in condition for allowance. Should the Examiner have any suggestions which may put the Application in better condition for allowance, Applicants' attorney is willing to discuss any such suggestions either by phone or at the U. S. Patent and Trademark Office.

Respectfully submitted,

*Thomas D. Rogerson*

Thomas D. Rogerson  
Attorney for Applicants  
Registration No. 38,602  
Telephone: 215-619-1569

Patent Department, 7th Floor  
Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19106-2399  
Date: January 21, 2004